

AGENDA — EESAT 2009

Sunday, October 4

5:00 pm - 6:00 Registration

6:00 pm - 8:00 Welcome Reception in the Madison Ballroom

Monday, October 5 – Plenary Sessions (Madison Ballroom)

AM

6:50 - 7:50 Registration (All Day in Madison Ballroom Foyer) & Continental Breakfast

7:50 - 8:00 Conference Announcements by Dan Borneo, Conference Mgr.

8:00 - 8:20 **WELCOME: Dr. Imre Gyuk, Manager**
Energy Storage Systems Research Program Manager
US Department of Energy

8:20 - 8:40 **KEYNOTE SPEAKER: Terry Oliver, Chief Technology Innovation Officer**
Bonneville Power Administration

“We Need a Change - Utilities Stepping up to the Plate on R&D”

Session 1 — Energy Storage Technologies & Projects Update

Chair: Jim McDowall (Saft Batteries)

8:40	-	9:00	Electrical Energy Storage - Technical Progress and Commercialisation	Anthony Price	UK
9:00	-	9:20	Energy Storage Deployments Scheduled for University of California at San Diego in 2009/2010	Byron Washom	USA
9:20	-	9:40	Feedback on the Proposed <i>Eskom Energy Storage Test Farm</i>	Pat Frampton	So. Africa
9:40	-	10:00	QUESTIONS / DISCUSSION		
10:00	-	10:15	MORNING BREAK		

Session 2 — Energy Storage Technologies & Projects Update (cont.)

Chair: Pramod Kulkarni

10:15	-	10:35	An Outline of Energy Storage Applications in Telecom Infrastructure in Sub-Saharan Africa	Derek Bristow	So. Africa
10:35	-	10:55	A Review of the 2009 Energy Storage Project at American Electrical Power	Ali Nourai	USA
10:55	-	11:15	UltraBattery for Utility-Scale Storage Applications	Peter Coppin	Australia
11:15	-	11:35	Large Format Carbon Enhanced VRLA Battery Test Results	Tom Hund	USA
11:35	-	11:55	QUESTIONS / DISCUSSION		
11:55	-	12:55pm	LUNCH BREAK (Third Floor Compass Rooms)		

Session 3 — Energy Storage for Renewable Applications

Chair: Ali Nourai (American Elect. Power)

PM	1:00	-	1:20	A different Model for Transporting Wind Energy to Market	Robert Scott	USA
	1:20	-	1:40	What Storage Challenges Face the Renewable Energy Industry for Photovoltaic and Wind Power	Masaaki Shiomi	Japan
	1:40	-	2:00	Energy Storage Considerations for Wind Power	Robert Hebner	USA
	2:00	-	2:20	Flywheel Energy Storage- A Smart Grid Approach for Supporting Wind Integration	Chet Lyons	USA
	2:20		2:40	QUESTIONS / DISCUSSION		
	2:40	-	3:00	AFTERNOON BREAK		

Session 4 — Energy Storage Innovations

Chair: Anthony Price (Swanbarton, Ltd.)

	3:00	-	3:20	GROW-DERS: A Practical Project Implementing Transportable Electrical Energy Storage in Power Systems	Petra de Boer	Netherlands
	3:20	-	3:40	Third Generation Redox Flow Battery; a Development Update	Mereille Schreurs	Netherlands
	3:40	-	4:00	Advanced Electrochemical Storage R&D for Renewable and Utility Applications at PNNL	Z. Gary Yang	USA
	4:00	-	4:20	QUESTIONS / DISCUSSION		
	5:30	-	7:30	RECEPTION- Courtesy of the <i>Electricity Storage Association</i> (ESA)		

Tuesday, October 6: PARALLEL SESSIONS — Group 1 (Madison Ballroom)

AM

6:50 - 7:50 Registration (All Day in Madison Ballroom Foyer) and Continental Breakfast

7:50 - 8:00 Conference Announcements

8:00 - 8:20 KEYNOTE SPEAKER: Kenneth Huber, Sr. Technology & Education Principal
PJM Interconnection

“The Role of Energy Storage Systems; An RTO/ISO Perspective”

Session 5 — Utilities' Energy Storage Projects

Chair: Rick Winter (Primus Power)

8:20 - 8:40	Empirical Field Data from VRB Flow Batteries Installed in Remote Telecoms Applications	Matthew Harper	Canada
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8:40 - 9:00	Vanadium Redox Flow Battery for Remote Area Power Supply	Martha Schreiber	Austria
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9:00 - 9:20	Achievements of an ABSOLYTE® Valve-Regulated Lead-Acid Battery Operating in a Utility Battery Energy Storage System (BEES) for 12 Years	George Hunt	USA
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9:20 - 9:40 QUESTIONS/DISCUSSION

9:40 - 9:55 MORNING BREAK

Session 6 — Energy Storage & Li-ion Technology

Chair: Dan Rastler (EPRI)

9:55 - 10:15	Spray Pyrolyzed Carbon Composite Anode Materials for Lithium-ion Batteries	Jia-Zhao Wang	Australia
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10:15 - 10:35	Improved Oxygen Electrode for Rechargeable Lithium/Oxygen Batteries	Mojtaba Mirzaeian	Scotland
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10:35 - 10:55	Flexible AC Transmission Systems with Dynamic Energy Storage	Magnus Callavik	Sweden
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10:55 - 11:15 QUESTIONS / DISCUSSION

11:15 - 1:00pm LUNCH BREAK

GUEST SPEAKER: John Petersen (Fefer, Petersen & Cie)

FEFER PETERSEN & CIE
ATTORNEYS AT LAW

“The New American Idols”

Session 7 — Compressed Air Energy Storage (CAES)

Chair: Gerard Thijssen (STORM)

PM	1:00	-	1:20	Technical Feasibility of Compressed Air Energy Storage in an Aquifer Storage Vessel	Michael King	USA
	1:20	-	1:40	Evaluating Plant Configurations for Adiabatic Compressed Air Energy Storage by Dynamic Simulation	Daniel Wolf	Germany
	1:40	-	2:00	Understanding the Opportunities and Performance Requirements for CAES in New York	Rahul Walawalkar	USA
	2:00	-	2:20	QUESTIONS / DISCUSSION		
	2:20	-	2:40	AFTERNOON BREAK		

Session 8 — Compressed Air Energy Storage (cont.)

Chair: Tony Vassallo (University of Sydney)

	2:40	-	3:00	Adsorption-enhanced Compressed Air Energy Storage	Timothy Havel	USA
	3:00	-	3:20	Turbomachinery Solutions for Advanced Adiabatic Compressed Air Energy Storage	Paolo del Turco	Italy
	3:20-		3:40	Compressed Air Energy Storage to Support Wind Integration and Reduced CO ₂ Emissions	Robert Schainker	USA
	3:40	-	4:00	Compressed Air Energy Storage as an Alternative to Transmission for Remote Wind Energy Resources	Paul Denholm	USA
	4:00	-	4:20	QUESTIONS / DISCUSSION		
	5:30	-	9:00	<i>DINNER CRUISE</i> (by Argosy Cruises)		

Tuesday, October 6: PARALLEL SESSIONS – Group 2 (afternoon only)

Session 9 — Electrochemical Capacitors

Chair: Mariesa Crow (Missouri State Univ.)

PM	1:00	-	1:20	The Effects of Temperature on the Performance of Electrochemical Double-Layered Capacitors	Isobel Fletcher	Scotland
	1:20	-	1:40	Proposal to Build Supercapacitors Using Solid Dielectrics	Frank Barnes	USA
	1:40	-	2:00	Nitrogen-enriched Carbons for Asymmetric Supercapacitors	A.J.R. Rennie	UK
	2:00	-	2:20	QUESTIONS / DISCUSSION		
	2:20	-	2:40	AFTERNOON BREAK		

Session 10 — Power Electronics

Chair: Jim Eyer (Distributed Utility Associates)

2:40	-	3:00	Charge/Discharge Control of Battery Energy Storage System for Peak Shaving	Yahia Baghzouz	USA
3:00	-	3:20	Demand Response Inverter for Distributed Generation Energy Management	Darren Hammell	USA
3:20	-	3:40	Large Area Silicon Carbide GTO Thyristor Development	Siddarth Sundaresan	USA
3:40	-	4:00	QUESTIONS / DISCUSSION		
6:00	-	9:00	<i>Dinner Cruise (by Argosy Cruises). Busses for the harbor begin loading at 5:00 pm.</i>		

Wednesday, October 7: Plenary Sessions (Madison Ballroom)

AM

6:50 - 8:00 Registration (All Day in Madison Ballroom Foyer) and Continental Breakfast
8:00 - 8:10 Conference Announcements

Session 11 — Energy Storage Economics & Benefits

Chair: Michael Strasik (Boeing)

8:10 - 8:30	Benefits Aggregation for Attractive Electricity Storage Value Propositions	James Eyer	USA
8:30 - 8:50	Estimating the Value of Energy Storage in Utility Applications	Colette Lamontagne	USA
8:50 - 9:10	Evaluating Emission Benefits from Using Advanced Storage at Commercial and Industrial Facilities in California	Rick Fioravanti	USA
9:10 - 9:30	Locating Potential Sites for Pumped Hydroelectric Energy Storage	David Connolly	Ireland
9:30 - 9:50	QUESTIONS / DISCUSSION		
9:50 - 10:10	MORNING BREAK		

Session 12 — Energy Storage Economics & Benefits (cont.)

Chair: Garth Corey (K-TEK)

10:10 - 10:30	Bridging the Intermittency Gap: Economic and Legal Incentives for Innovative Solutions in Renewable Storage	Elise Zoli	USA
10:30 - 10:50	Technical and Economical Assessment of Storage Technologies for Power-Supply Grids	Heide Meiwes	German
10:50 - 11:10	Thermal Energy Storage is Electric Energy Storage	Mark MacCracken	USA
11:10 - 11:30	A Simple Flywheel Induction Motor for Rush Power Supply in Inverter-driven System	Mia-miao Cheng	Japan
11:30 - 11:50	QUESTIONS / DISCUSSION		
11:50 - 1:00pm	LUNCH BREAK		

Session 13 — Energy Storage Applications for Utilities

Chair: Haresh Kamath (EPRI)

PM	1:00	-	1:20	Applications of Sodium-Sulfur (NAS) Batteries in Utility-Scale Applications and Renewable Energy	Akimichi Okimoto	Japan
	1:20	-	1:40	Selecting the Best Battery System Suitable for Electricity Energy Storage	Bor Yann Liaw	USA
	1:40	-	2:00	Determination of Specification Criteria for Large Scale Battery Systems	Haresh Kamath	USA
	2:00	-	2:20	DC Railway Catenary Regulation Based on KESS	Marcos Lafoz	Spain
	2:20	-	2:40	QUESTIONS / DISCUSSION		
	2:40		3:00	CLOSING REMARKS Dr. Imre Gyuk (US DOE) Brad Roberts, Past-President of ESA		